

WHAT IS CLAIMED IS:

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1. A method for controlling the drive energy of an ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head to a printing medium for performing printing, the method comprising:
- a first step for supplying a plurality of different drive energies successively to said ink jet print head;
 - a second step for monitoring temperature of each of said ink jet print head according to the supply of said drive energy;
 - a third step for judging a threshold drive energy required for ink ejection of said ink jet print head using a value for said supplied drive energy and a value for said monitored temperature;
 - a fourth step for determining a drive condition for ejecting ink on the basis of said threshold drive energy; and
 - a fifth step for driving said print element on the basis of said determined drive condition.
2. A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said first step, a difference of the amount of the drive energy supplied to said ink jet print head is generated by changing a pulse width of a drive pulse signal applied to said print element.

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3. A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said first step, an initial drive energy supplied is determined on the basis of drive condition information stored in said ink jet print head.

4. A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said fifth step, said determined drive condition is compared with drive condition information stored in said ink jet print head, and when both are different, drive energy to drive said print element is changed.

5. A method for controlling the drive energy of an ink jet print apparatus according to claim 1, wherein in said fifth step, when said determined drive condition is different from drive condition information stored in said ink jet print head, drive condition information stored in said ink jet print head is updated with the determined drive condition data.

6. A method for controlling the drive energy of an ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head to a printing medium for performing printing, the method comprising:

5 a first step for supplying a plurality of different drive energies successively to said ink jet print head;

6 a second step for monitoring temperature of each of
7 said ink jet print head according to the supply of said
8 drive energy;

9 a third step for determining a drive condition for
10 ejecting ink using a value for said supplied drive energy
11 and a value for said monitored temperature; and

12 a fourth step for driving said print element on the
13 basis of said determined drive condition.

14 7. An ink jet print apparatus wherein a print element
15 is driven to eject an ink from an ink jet print head for
16 performing printing, the ink jet print apparatus
17 comprising:

18 first means for supplying a plurality of different
19 drive energies successively to said ink jet print head;

20 second means for monitoring temperature of each of
21 said ink jet print head according to supply of said drive
22 energy;

23 third means for judging a threshold drive energy
24 required for ejection of said ink jet print head using a
25 value for said supplied drive energy and a value for said
26 monitored temperature;

27 fourth means for determining a drive condition for
28 ejecting ink on the basis of said threshold drive energy;
29 and

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fifth means for changing drive energy applied to the print element of said ink jet print head on the basis of said determined drive condition.

- 5 8. An ink jet print apparatus according to claim 7, wherein a change of drive energy supplied to said ink jet print head is performed by is performed by changing a pulse width of a drive pulse signal applied to said print element.
- 10 9. An ink jet print apparatus according to claim 7, wherein an initial drive energy supplied by said first means is determined on the basis of drive condition information stored in said ink jet print head.
- 15 10. An ink jet print apparatus according to claim 7, wherein said fifth means compares said determined drive condition with drive condition information stored in said ink jet print head, and when both are different, changes drive energy to drive said print element.
- 20 11. An ink jet print apparatus according to claim 7, wherein said fifth means, when said determined optimum drive condition is different from drive condition information stored in said ink jet print head, updates
- 25 drive condition information stored in said ink jet print head with determined drive condition data.

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12. An ink jet print apparatus wherein a print element is driven to eject an ink from an ink jet print head for performing printing, the ink jet print apparatus comprising:

5 first means for supplying a plurality of different drive energies successively to said ink jet print head;

 second means for monitoring temperature of each of said ink jet print head according to supply of said drive energy;

10 third means for determining a drive condition for ejecting ink using a value for said supplied drive energy and a value for said monitored temperature; and

 fourth means for changing drive energy applied to the print element of said ink jet print head on the basis of
15 said determined drive condition.

13. An ink jet print apparatus wherein a memory for storing drive condition data is provided on an ink jet print head, by driving a print element an ink is ejected from said ink
20 jet print head to a printing medium for performing printing, the ink jet print apparatus comprising:

 first means for supplying a plurality of different drive energies successively to said ink jet print head;

 second means for monitoring temperature of each of
25 said ink jet print head according to supply of said drive energy;

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